Project Fact Sheet

Fracture Flow Permeability Mapping and Fluid Flow Monitoring at The Geysers

GOALS

- To apply a new borehole geophysical tool and modeling software to better understand permeability in fractured-rock geothermal systems.
- To demonstrate the new tool and modeling software's effectiveness in the difficult geothermal environment of The Geysers.

PROJECT DESCRIPTION

This project applies a new geophysical tool, GeoBILT, which was developed under a PIER contract, to the aggressive geothermal environment at The Geysers. The tool's ability to map in three dimensions variations in resistivity in the vicinity of boreholes makes it a potentially powerful aid in subsurface delineation in both new and existing reservoirs, for siting new wells, make-up wells, step-out wells, and to improve a water injection program. The project hopes to show that subsurface fractures controlling fluid flow can be mapped in the geologically difficult setting of The Geysers.

BENEFITS TO CALIFORNIA

If management of fluid injection at The Geysers can be improved, the life of this field may be extended. This would be of benefit to California since The Geysers is the largest geothermal resource in the nation and accounts for about 5% of electricity production in California. Demonstrating GeoBILT's ability to produce usable imaging of subsurface fractures in a geologically active geothermal area like The Geysers will mean that the new instrument is capable of improving reservoir understanding, and providing subsurface geophysical detail,

to the geothermal industry. Currently the geophysical tools available for detailed subsurface mapping are not capable of working in geothermal temperatures.

FUNDING AMOUNT

Commission	$747, 726
Match	$748,932

PROJECT STATUS

Ongoing.

FOR MORE INFORMATION

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